

LONGBOTTOM ET AL.  
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**AMENDMENTS TO THE ABSTRACT:**

Please insert the Abstract of the Disclosure which is on the attached sheet.

## **ABSTRACT**

Various medical conditions in a subject may be diagnosed by comparing the concentration of a diagnostic species such as ethane in breath samples from a subject from different stages of the breathing cycle. Using phase sensitive measurement of absorption of IR laser radiation, very small concentrations of the diagnostic species can be measured. Apparatus for collecting breath samples from different stages of the breathing cycle is also disclosed.